



US 20200040047A1

(19) **United States**(12) **Patent Application Publication**
SÖLLNER et al.(10) **Pub. No.: US 2020/0040047 A1**(43) **Pub. Date: Feb. 6, 2020**(54) **INTERACTION OF DRAXIN AND Y-NETRINS****Publication Classification**(71) Applicant: **Max-Planck-Gesellschaft zur
Förderung der Wissenschaften e.V.,**
Muenchen (DE)(51) **Int. Cl.****C07K 14/47** (2006.01)**C07K 14/475** (2006.01)**C07K 16/18** (2006.01)**C07K 14/46** (2006.01)(72) Inventors: **Christian SÖLLNER**, Nürtingen (DE);
Xuefan GAO, Tübingen (DE);
Christiane NÜSSLEIN-VOLHARD,
Tübingen-Bebenhausen (DE)(52) **U.S. Cl.**CPC **C07K 14/4703** (2013.01); **C07K 14/475**
(2013.01); **C07K 16/18** (2013.01); **A61K 38/00**
(2013.01); **C07K 14/47** (2013.01); **C07K**
2319/30 (2013.01); **C07K 14/461** (2013.01)(73) Assignee: **Max-Planck-Gesellschaft zur
Förderung der Wissenschaften e.V.,**
Muenchen (DE)

(57)

ABSTRACT(21) Appl. No.: **16/553,536**(22) Filed: **Aug. 28, 2019****Related U.S. Application Data**(62) Division of application No. 15/113,878, filed on Jul.
25, 2016, now Pat. No. 10,435,442, filed as applica-
tion No. PCT/EP2015/051088 on Jan. 21, 2015.(60) Provisional application No. 62/049,643, filed on Sep.
12, 2014.(30) **Foreign Application Priority Data**

Jan. 23, 2014 (EP) 14152341.5

This invention relates to extracellular protein-protein interactions and their possible therapeutic uses. More particularly, this invention describes the interaction between Draxin, particularly fragments binding to γ -Netrins comprising SEQ ID NO.:1, 2 or 3, and variants thereof, with γ -Netrins, and the use of this interaction to disrupt γ -Netrin/Netrin receptor interactions. The invention also relates to diagnostic and/or therapeutic uses of Draxin or fragments or variants thereof, as well as to an antibody against Draxin inhibiting binding of Draxin to γ -Netrins. Further, the invention relates to fragments of γ -Netrins, in particular Draxin-binding Netrin1-fragments comprising SEQ ID NO.: 51 and variants thereof, as well as to an antibody against γ -Netrins inhibiting binding of γ -Netrins to Netrin receptors.

Specification includes a Sequence Listing.